#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES Office of Structural Materials

Quality Assurance and Source Inspection

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Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 69.28

# WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary **Report No:** WIR-010865 Address: 333 Burma Road **Date Inspected:** 21-Dec-2009

City: Oakland, CA 94607

**Project Name:** SAS Superstructure **OSM Arrival Time:** 700 **OSM Departure Time:** 1900 **Prime Contractor:** American Bridge/Fluor Enterprises, a JV

Contractor: Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

**CWI Name: CWI Present:** Yes Li Yang No **Inspected CWI report:** Yes N/A **Rod Oven in Use:** Yes No No N/A N/A **Electrode to specification:** Yes No Weld Procedures Followed: Yes No N/A N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes N/A **Approved Drawings:** Yes No **Approved WPS:** No Yes No N/A **Delayed / Cancelled:** 

**Bridge No:** 34-0006 **Component:** OBG Trail Assembly

#### **Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 6AE to 6BE

This QA Inspector observed ZPMC welding personnel performing Heat Straightening for Longitudinal Diaphragm for Cross Beam and Bike Path side for Segment 6AE to 6Be between PP 40 and PP 41 against HSR 1(B)-7928 Rev.0 Dated Nov. 23, 2009.

CB5 (Connecting at Segment 6AE FL3 at PP 38)

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for CB5 at Panel Point 38. Weld Joint identified as CB202A-005-015 and CB202A-005-003. The welder was identified as 654467. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-Tc-U4b-FCM. The welding parameters measured and recorded by ZPMC QC were complying the WPS.

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CB5 (Connecting at Segment 6AW FL3 at PP 40)

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for CB5 at Panel Point 40. Weld Joint identified as Seg 027H-099/100, 053/054 and 044/045 for stiffener hold back areas. The welder was identified as 220063. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-T-2134. The welding parameters measured and recorded by ZPMC QC were complying the WPS.

Segment 6AW to 6BW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for back gouged Transverse Splice weld at Side Panel Counter Weight side for Segment 6AW to 6BW between Panel Point (PP) 40 and PP 41. Weld Identified as OBW6B-002. The welder was identified as 067571. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-B-U2-FCM-1. The welding parameters measured and recorded by ZPMC QC were complying the WPS.

Segment 6AW to 6BW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for back gouged Transverse Splice weld at Side Panel Corner Assembly Counter Weight side for Segment 6AW to 6BW between Panel Point (PP) 40 and PP 41. Weld Identified as OBW6B-001. The welder was identified as 066261. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-B-U2-FCM-1. The welding parameters measured and recorded by ZPMC QC were complying the WPS.

Segment 6AW

This QA Inspector observed ZPMC welding personnel performing Shielded Metal Arc Welding (SMAW) for Corner Assembly at Counter Weight side for Segment 6AW. Weld Identified as CA025-002. The welder was identified as 037840. In process SMAW appears to be progressing in compliance with Caltrans Engineer Approved welding procedure i.e., WPS-B-P-2214-Tc-U4b-FCM-1. The welding parameters measured and recorded by ZPMC QC were complying the WPS.

Segment 6AE to 6BE

This QA Inspector observed ZPMC personnel at performing Heat Straightening for Side Panel Cross Beam side as it got distorted during Transverse Splice welding, thus Side Panel Hold back welded areas been back gouged and Heat Straightening has been performed for Segment 6AE to 6BE between Panel Point (PP) 40 and PP 41.

Segment 5AE to 5BE

This QA Inspector observed ZPMC personnel performing Magnetic Particle Test (MT) test been performed at Hold back welded areas for Segment 5AE to 5BE between Panel Point (PP) 31 and PP 32 at Bottom Panel, Side

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Panel (Cross Beam and Bike Path Side).

Segment 5AW to 5BW

This QA Inspector observed ZPMC personnel performing Magnetic Particle Test (MT) test been performed at Hold back welded areas for Segment 5AE to 5BE between Panel Point (PP) 31 and PP 32 at Bottom Panel, Side Panel (Cross Beam and Bike Path Side).

Segment 5CW to 6AW

This QA Inspector observed ZPMC personnel match drilling the T-Ribs Web locations for installing Splice Plates for Segment 5CW to 6AW between Panel Point (PP) 36 and PP 37 at Bottom Panel, Cross Beam and Counter Weight side for Segment 5CW to 6AW between Panel Point (PP) 36 and PP 37 at Bottom Panel, Side Panel (Cross Beam and Bike Path Side).

Segment 6AW to 6BW

This QA Inspector observed ZPMC personnel performing back gouging for Deck Panel Transverse Weld connecting the Segment 6AW to 6BW between Panel Point 40 and PP 41.

Segment 6CW

This QA Inspector observed ZPMC personnel installing the Splice Plates on the T-Ribs at Side Panel Cross Beam side for Segment 6CW between Panel Point (PP) 45 to PP 45.5 and PP 45.5 to PP 46.

Segment 5BW to 5CW

This QA Inspector observed ZPMC personnel performing Ultrasonic Test (UT) test been performed at Bottom Panel and Counter Weight side panel.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

### **Summary of Conversations:**

No relevant conversations.

#### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact, who represents the Office of Structural Materials for your project.

Inspected By:	Math, Manjunath	Quality Assurance Inspector
Reviewed By:	Miller,Mark	QA Reviewer